AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior listings of claims in the application:

LISTING OF CLAIMS:

1-234 were cancelled in an Amendment dated January 11, 2005.

Claims 235-286 .(Previously Cancelled).

287. (Amended Herein) A method for identifying a compound that putatively modulates taste [.] in a human subject based on its effect in T1R1 polypeptide activation comprising:

(i) screening one or more compounds in a functional assay that detects compounds which activate or modulate (enhance or inhibit) the activation of a **human taste receptor** comprising a human T1R1 polypeptide selected from the group consisting of:

(a) a TlRl polypeptide having the amino acid sequence [contained] in SEQ. ID. NO: 17;

(b) a human T1R1 polypeptide that possesses at least 90% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17 that specifically binds to a ligand that also specifically binds to the T1R1 polypeptide [contained] in SEQ ID NO:17;

(c) a human T1R1 polypeptide which is encoded by a nucleic acid sequence that hybridizes to the T1R1 polypeptide coding region of the nucleic acid sequence [contained] in SEQ. ID. NO: 15 or 16 under stringent hybridization conditions which are 50% formamide, 5X SCC and 1% SDS, incubating at 42 degrees C and wash in 0.2X SSC and 0.1% SDS at 65 degrees C and which T1R1 polypeptide that specifically binds to a taste ligand that specifically binds to the T1R1 polypeptide [contained] in SEQ ID NO:17; and

(ii) identifying compounds that putatively modulate taste in a human subject based on their (a) activation or modulation (inhibition or enhancement) of the activation of said T1R1 polypeptide according to (a), (b), or (c), in said functional assay (i).

288. (New) The method of claim 287, wherein said T1R1 polypeptide has the amino acid sequence [contained] in SEQ. ID. NO: 17.

289. (New) The method of claim 287, wherein said T1R1 polypeptide has an amino acid sequence that possesses at least 90% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

290. (New) The method of claim 287, wherein said T1R1 polypeptide has an amino acid sequence that possesses at least 95% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

291. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide has an amino acid sequence that possesses at least 96% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

292. (Previously Presented) The method of claim 287, wherein the T1R1 polypeptide possesses at least 97% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

293. (Amended Herein) The method of claim 287, wherein said T1R1 polypeptide has an amino acid sequence that possesses at least 97% sequence identity to the polypeptide [contained] in SEQ. ID. NO: [21] **17**.

294. (Previously Presented) The method of claim 287, wherein said TlR2 polypeptide has an amino acid sequence that possesses at least 98% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

295. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide has an amino acid sequence that possesses at least 99% sequence identity to the polypeptide [contained] in SEQ. ID. NO: 17.

296. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide is encoded by a nucleic acid sequence that hybridizes to the T1R1 coding region [contained] in SEQ. ID. NO: **15 or 16** [20] under stringent hybridization conditions.

297. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide comprises a functional fragment of the polypeptide [contained] in SEQ. ID. No: 17.

298. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide is expressed in a cell.

299. (Previously Presented) The method of claim 298, wherein said cell is intact or permeabilized.

300. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide is comprised in a membrane extract.

301. (Previously Presented) The method of claim 298, wherein said T1R1 polypeptide is expressed on the surface of said cell.

302. (Previously Presented) The method of claim 298, wherein the cell is a prokaryotic cell.

303. (Previously Presented) The method of claim 298, wherein the cell is a eukaryotic cell.

304. (Previously Presented) The method of claim 298, wherein said cell is a yeast, insect, amphibian or mammalian cell.

305. (Previously Presented) The method of claim 298, wherein the cell is a CHO, HEK-293, COS or Xenopus oocyte.

306. (Previously Presented) The method of claims 298, wherein said cell expresses a G protein.

307. (Previously Presented) The method of claim 306, wherein said G protein is $G_{\alpha 15}$ or $G_{\alpha 16}$ or gustducin.

308. (Previously Presented) The method of claim 287, wherein said functional assay detects the effect of said compound on phosphorylation of the TlR2 polypeptide.

309. (Previously Presented) The method of claim 287, wherein the functional assay detects the effect of said compound on the dissociation of said TlR2 polypeptide and a G protein.

310. (Previously Presented) The method of claim 287, wherein the functional assay detects the effect of said compound on arrestin translocation.

311. (Previously Presented) The method of claim 287, wherein the functional assay detects the effect of said compound on second messenger(s).

312. (Previously Presented) The method of claim 287, wherein the functional assay detects the effect of said compound on signal transduction.

313. (Previously Presented) The method of claim 287, wherein the functional assay is a fluorescent polarization assay.

314. (Previously Presented) The method of claim 287, wherein said functional assay is a GTPγ^{35}S assay.

315. (Previously Presented) The method of claim 287, wherein said functional assay detects changes in cAMP, cGMP or IP3.

316. (Previously Presented) The method of claims 287, wherein said functional assay detects changes in intracellular calcium.

317. (Previously Presented) The method of claim 316, which uses a calcium-sensitive dye.

318. (Previously Presented) The method of claim 287 which detects the effect of said compound on G protein activation by said T1R1 polypeptide.

319. (Previously Presented) The method of claim 318, wherein said G protein is $G_{\alpha 15}$, $G_{\alpha 16}$ or gustducin.

320. (Previously Presented) The method of claim 287, wherein said T1R1 polypeptide in said functional assay is stably or transiently expressed by a cell.

321. (Previously Presented) The method of claim 287, wherein the functional assay detects changes in ionic polarization of a cell or membrane that expresses the T1R1 polypeptide.

322. (Previously Presented) The method of claim 321, wherein ion polarization is detected by a voltage-clamp or patch-clamp method.

323. (Previously Presented) The method of claim 287, wherein said functional assay comprises a radiolabeled ion flux assay or fluorescence assay that detects T1R1 activity using a voltage-sensitive dye.

324. (Previously Presented) The method if claim 287, wherein said assay comprises a fluorescent polarization or FRET assay.

325. (Previously Presented) The method of claim 287, wherein said assay detects changes in adenylate cyclase activity.

326. (Previously Presented) The method of claim 287, wherein the functional assay detects changes in ligand-dependent coupling of said T1R1 polypeptide with a G protein.

327. (Previously Presented) The method of claim 326, wherein said G protein is $G_{\alpha 15}$ or $G_{\alpha 16}$ or gustducin.

328. (Previously Presented) The method of claim 287, wherein said functional assay detects changes in intracellular cAMP or cGMP.

329. (Previously Presented) The method of claim 287, wherein said assay measures the effect of said compound on transmitter or hormone release.

330. (Previously Presented) The method of claim 287 wherein said functional assay detects the effect of said compound on the transcription of a gene of interest.

331. (Previously Presented) The method of claim 330, wherein said gene is a reporter selected from chloramphenicol acetyltransferase, luciferase, 3'-galactosidase and alkaline phosphatase.

332. (Previously Presented) The method of claim 287, wherein the functional assay is a high throughput assay.

333. (Previously Presented) The method of 332, wherein said functional assay screens a library of compounds.

334. (Previously Presented) The method of claim 333, wherein said library is a combinatorial chemical library.

335. (Previously Presented) The method of claim 333, wherein said library comprises at least 1000 compounds.

336. (Previously Presented) The method of claim 287, wherein the effect of [said] **a** putative taste modulator **compound** is further assayed in vivo for its effect on taste.

337. (Previously Presented) The method of claim 336 which is used to assay the effect of said compound on the taste of a particular compound.

338. (Previously Presented) The method of claim 336, wherein said assay is used to detect the effect of said compound on sweet or umami taste.